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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/207,130
Filing Date: December 08, 1998
Appellant(s): CONRAD ET AL.

Joseph A. Sawyer, Jr.
For Appellant

EXAMINER'S ANSWER

MAILED

AUG 16 2004

GROUP 3600

This is in response to the appeal brief filed 6/1/04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The appellant's statement in the brief that certain claims do not stand or fall together is not agreed with because the appellant states that there are four separate groups, however, appellant does not technically argue each group. Appellant only makes arguments for claim 1. For these reasons, the examiner will constructively group all pending claims to stand or fall together in the same group.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binkley, et al (US Patent 5,088,033), in view of Weber (US Patent 5,812, 668).

As per claims 1, 2, 7, 8, 9, 14, 15, Binkley, et al discloses:

providing an emulation module interfacing directly with the operating system and corresponding to the device/providing an emulation object interfacing directly with the operating system and corresponding to the device /an emulation module interfacing directly with the operating system and corresponding to the device/an emulation object interfacing directly with the operating system and corresponding to the device (Col. 3, lines 34-37, Col. 8, lines 62-68).

ensuring that the application will utilize the emulation module when the application is executed on the development system/ensuring that the application will utilize the emulation object.../means for ensuring.../wherein the application is capable of utilizing the emulation module in lieu of the device.../emulating the interaction...(Col. 6, line 66-Col. 7, line 4);

executing the application on the development system independently of the point of sale system, wherein the emulation module and the application emulate the

interaction between the application and the device that occurs when the application is executed on the point of sale equipment/wherein the application is executed on the system, the emulation module and the application independently.../wherein the application is executed on the development system, the emulation module and the application emulate the interaction...(Col. 1, lines 60-62, Col. 1, line 66-Col. 2, line 1, Col. 2, lines 9-19, Col. 7, lines 32-38, [where the examiner is interpreting the “development system” and the “point of sale system” of the present invention to be analogous to the “host system” and “target system” of Binkley, et al];

wherein the emulation module and the application both interface directly with the operating system of the development system, (Col. 59, lines 31-38 and lines 54-61, [where the emulation module resides with the emulation processor and where the host system or development system’s environment comprises device emulating means for directly interfacing with the target system I/O operation (application), See Col. 59, lines 54-61. It is also shown that the host/development system’s environment comprises means for determining a current emulated state of the communication means, meaning the host/development system has direct contact with emulation means/modules (See Col. 59, lines 50-53)].

ensuring that the application adequately utilizes the emulation object...(Col. 2, lines 9-13);

modifying the application...(Col. 1, lines 11-14, Col. 2, lines 13-19).

allowing a developer to provide input...(Col. 50, lines 41-43);

providing the input to the application in a form expected...(Col. 51, lines 3-17).

Binkley, et al fails to teach the following, however, Weber discloses:

A point of sale environment/A point of sale system.../wherein the device is specialized for the point of sale equipment, (Col. 65, lines 54-63,w/ abstract, lines 1-11)

It would have been obvious to one of ordinary skill in the art for the device to be specialized for the point of sale equipment because the transactions that are being tested on a different computer in Weber (test gateway computer) are occurring in a pos environment. In this case, since transactions are occurring at a pos system, any device used at the pos must therefore be specialized or formatted to operate at the pos system.

As per claims 3, 10, Binkley, et al discloses:

wherein the application is platform independent...(Col. 58, line 46-Col. 59, line 10).

As per claim 5, 12, Binkley, et al discloses:

wherein the point of sale equipment includes a driver...(Col. 19, line 67-Col. 20, line 6).

As per claim 6, 13, Binkley, et al discloses:

wherein the emulation object emulates the driver and the device...(Col. 19, lines 11-15, Col. 19, line 67-Col. 20, line 6).

As per claims 4, 11, Binkley, et al fails to teach the following, however Weber discloses:

wherein the application is a JAVA application...(Col. 7, lines 15-17).

It would have been obvious to one of ordinary skill in the art to make the application and the emulation object platform independent because in a computer environment, applications are constantly being changed around and depending on these changes and the needs of the user, the platforms will also need to change in order to fit the environment. It would have been obvious to one of ordinary skill in the art to make the application and the emulation object JAVA applications because JAVA is a common,

distributed programming language that is simple and is used for object-oriented programming in the application development art.

(11) Response to Argument

First, appellant argues that Binkley in view of Weber neither teaches nor suggests directly interfacing the application being developed for a POS system and the emulation module emulating a specialized device for the POS system directly with the operating system of the development system. However, the combination of Binkley and Weber discloses this feature. Specifically, in Binkley, Col. 59, lines 31-38 and lines 54-61, it is disclosed that the emulation module resides with the emulation processor and that the host system or development system's environment comprises device-emulating means for *directly interfacing* with the target system I/O operation or the application. In addition, Col. 59, lines 50-53 of Binkley discloses that the host/development system's environment comprises means for determining a current emulated state of the communication means, meaning the host/development system has direct contact with emulation means/modules.

Appellant also argues that any software module used to emulate devices in Binkley will interface with different operating systems, and that the system of Binkley uses separate host and emulation processors. However, the limitations of claim 1 do not disclose using the same host and emulation processor, but merely discloses that the emulation module and the application both interface directly with the operating system of the development system (for one application) therefore, if there were more than one application, the emulation module for that particular application and that application would interface directly with the operating system of the development system for that particular application, which, is different for the operating system for the first application.

In addition, as disclosed by appellant on page 8, lines 5-6 of the brief, the emulation processor *would naturally run* the operating system and other applications for the target system, therefore, it would also be natural and common in an emulation environment for the application being developed to also interface with the operating system of the emulation processor, in addition to the operating system of the development system in order for emulation of that application to occur.

Appellant also argues that Weber fails to remedy the defects of Binkley and that Weber does describe POS technology, and according to appellant, Weber relates to the final POS system used by an end user, rather than a mechanism for testing applications being developed for use with a POS system. However, Weber describes a system where a merchant-controlled computer communicates with *a test gateway* by transmitting messages over a communications channel that are related to transactions to the test gateway computer (as shown in abstract). In addition, in Col. 65, lines 54-63, Weber describes a POS application where a data structure representing a POS transaction request is initiated. Therefore, Weber describes the testing of a POS application. Since the test gateway of Weber responds with *simulated* transaction responses that include configuration data that is used by the merchant-operated computer to configure itself to access a production gateway computer, as described in the abstract of Weber, the testing of the POS application is processed for an application being developed. In "The Authoritative Dictionary of IEEE Standards Terms", emulate is defined as follows: "A model that accepts the same inputs and produces the same outputs as a given system represented...See also: simulate". The term simulate is defined as follows: "To represent the functioning of one system by another...". Therefore, according to "The Authoritative Dictionary of IEEE Standards Terms", simulating is a form of emulating, but more specific to computer systems. Therefore,

these simulated responses of Weber correspond to the emulated responses of the present invention.

Since all claims now stand and fall together, claims 2-15 are rejected for the same reasons as discussed above with respect to claim 1.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

A. R. B.
August 5, 2004

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THE
AUTHORITATIVE
DICTIONARY
OF IEEE STANDARDS TERMS
SEVENTH EDITION



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Standards Information Network
IEEE Press

IEEE 100
The Authoritative Dictionary of
IEEE Standards Terms

Seventh Edition



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exitance (for hemispherical emittance) of a sample of a thermal radiator to that of a blackbody radiator at the same temperature. Formerly, exitance. The use of exitance with this meaning is deprecated. (EEC/IE) [126]

(2) (photovoltaic power system) The ratio of the radiant flux-intensity from a given body to that of a black body at the same temperature. *See also*: photovoltaic power system. (AES) [41]

emitter (1) (transistor) A region from which charge carriers that are minority carriers in the base are injected into the base. (ED/IA) 216-1960w, [12], 270-1966w

(2) A device that is able to discharge detectable electromagnetic, seismic, or acoustic energy. (DIS/C) 1278.1-1995

emitter-coupled logic A family of non-saturated, very high speed, bipolar logic devices that are commonly used in high performance processors, which dissipate relatively large amounts of power. (C) 610.10-1994w

emitter junction (semiconductor devices) A junction normally biased in the low-resistance direction to inject minority carriers into an interelectrode region. *See also*: semiconductor; transistor. (Std100) 270-1966w

emitter, majority *See*: majority emitter.

emitter, minority *See*: minority emitter.

emitting sole (microwave tubes) An electron source in crossed-field amplifiers that is extensive and parallel to the slow-wave circuit and that may be a hot or cold electron-emitter. (ED) [45]

EMP *See*: electromagnetic pulse.

emperor The processor that has the responsibility for initialization of an entire multiprocessor system. (C/MM) 1596-1992

emperor processor (1) The monarch processor that is selected to initialize and configure the system. On a single-bus system, the monarch and emperor processor are always the same. On a multiple-bus system, the single emperor processor is selected from the available monarch processors. (C/MM) 1212-1991s

(2) The monarch processor selected to direct the configuration and initialization of an entire system with multiple interconnected logical buses. (C/BA) 896.4-1993w, 10857-1994

emphasis Highlighting, color change, or another visual indication of the condition of an object or choice, and the effect of that condition on the ability of the user to interact with that object or choice. Emphasis can also give the user additional information about the state of an object or choice. (C) 1295-1993w

empirical Pertaining to information that is derived from observation, experiment, or experience. (C) 610.3-1989w

empirical propagation model A propagation model that is based solely on measured path-loss data. *See also*: electromagnetic compatibility. (EMC) [53]

empty directory (1) A directory that contains, at most, directory entries for dot and dot-dot. (C/PA) 9945-1-1996, 9945-2-1993

(2) A directory that contains, at most, entries for dot and dot-dot. (C) 1003.5-1999

empty line A line consisting of only a (newline) character. *See also*: blank line. (C/PA) 9945-2-1993

empty medium (1) A data medium that does not contain data. (C) 610.5-1990w

(2) A data medium that contains only marks of reference and no user data; For example, a formatted floppy disk. *See also*: blank medium; virgin medium. (C) 610.10-1994w

empty queued arbitrated slot A Queued Arbitrated (QA) slot that was designated by the Head of Bus function as being available for transfer of a QA segment, and that does not contain a QA segment. (LM/C) 8802-6-1994

empty string (1) A character array whose first element is a null character. *Synonym*: null string. (C/PA) 9945-1-1996, 9945-2-1993

(2) A zero-length array whose components are of some character type. *Synonym*: null string. (C) 1003.5-1999

empty weight *See*: actual weight.

EMT *See*: electrical metallic tubing.

emulate To represent a system by a model that accepts the same inputs and produces the same outputs as the system represented. For example, to emulate an 8-bit computer with a 32-bit computer. *See also*: simulate. (C) 610.3-1989w

emulation (A) (software) A model that accepts the same inputs and produces the same outputs as a given system. *See also*: simulation. (B) (software) The process of developing or using a model as in (A). (C) 610.3-1989, 610.12-1990

emulator (modeling and simulation) (software) A device, computer program, or system that performs emulation. (C) 610.3-1989w, 610.12-1990

enable (1) (supervisory control, data acquisition, and automatic control) (station control and data acquisition) A command or condition that permits some specific event to occur. (PE/SUB) C37.1-1994

(2) A command or condition that permits some specific event to proceed. (SWG/PE) C37.100-1992

enable high only (local area networks) A link control signal from an upper repeater to a lower repeater pre-empting a lower repeater's normal-priority round-robin control cycle. (C) 8802-12-1998

enabling pulse (1) (navigation) A pulse that prepares a circuit for some subsequent action. (AES/RS) 686-1982s, [42]

(2) A pulse that opens an electric gate normally closed, or otherwise permits an operation for which it is a necessary but not a sufficient condition. *See also*: pulse. (EEC/PE) [119]

enamel (1) (general) A paint that is characterized by an ability to form an especially smooth film. (PE/IA/PC) [9], [65]

(2) (rotating machinery) (wire) A smooth film applied to wire usually by a coating process. *See also*: rotor; stator. (PE) [9]

encapsulated (rotating machinery) A machine in which one or more of the windings is completely encased by molded insulation. *See also*: asynchronous machine. (PE) [9]

encapsulation (1) (germanium gamma-ray detectors) (of a semiconductor radiation detector) The packaging of a detector for protective or mounting purposes, or both. (NPS) 325-1986s

(2) (software) A software development technique that consists of isolating a system function or a set of data and operations on those data within a module and providing precise specifications for the module. *See also*: information hiding; data abstraction. (C) 610.12-1990

(3) In the context of AI-ESTATE, the act of specifying a test or collection of tests together with associated preconditions and post conditions. (ATLAS) 1232-1991

(4) In the context of AI-ESTATE, the act of specifying a test or collection of tests together with the associated preconditions and postconditions. Alternately, the process of hiding all of the details of an object that do not contribute to the essential characteristics. (SCC20) 1232.1-1997

(5) A technique used by layered protocols to carry foreign protocols in a network. (C) 610.7-1993

(6) The grouping of data and operations upon that data into a single object. (SCC20) 1226-1998

(7) The concept that access to the names, meanings, and values of the responsibilities of a class is entirely separated from access to their realization. (C/SE) 1320.2-1994

(8) In 1000BASE-X, the process by which a MAC packet is enclosed within a PCS code-group stream. (C/LM) 802.3-1998

encipherment The cryptographic transformation of data to produce ciphertext. *See also*: cryptography. (LM/C) 802.10-1992

enclosed Surrounded by case, cage, or fence designed to protect the contained equipment and limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects. (NESC) C2-1997

enclosed brake A brake that is provided with an enclosure that covers the entire brake, including the brake actuator, the brake

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simuland The system being simulated by a simulation.

(C) 610.3-1989w

simulate (1) (computers) To represent the functioning of one system by another, for example, to represent one computer by another, to represent a physical system by the execution of a computer program, to represent a biological system by a mathematical model. *See also:* electronic analog computer.

(C) [20], [85]

(2) (modeling and simulation) To represent a system by a model that behaves or operates like the system. *See also:* emulate.

(C) 610.3-1989w

simulated ESD An ESD that originates from an ESD simulator.

(EMC) C63.16-1993

simulated fly ash The entrained ash produced by suspension firing in a small-scale pulverized coal combustor designed and operated with the objective of closely approximating certain selected properties of the fly ash produced in the full-scale steam generator of interest. The combustor should have the capability of providing approximately the same time/temperature profile for combustion as would occur in a full-scale boiler furnace. This process is applicable particularly when coal from a new source has never been burned in a full-scale boiler.

(PE/EDPG) 548-1984w

simulated meter A simulated meter is an assembly consisting of a watt-hour meter cover, base, and jumper bars constructed to represent the thermal characteristics of a specific class of watt-hour meter to be used in the testing of a meter socket for temperature rise at continuous ampere rating.

(ELM) C12.10-1987

simulated source A radioactive source consisting of one or more long-lived radionuclides that are chosen to simulate the radiations from a short-lived or unavailable radionuclide of interest.

(NI) N42.12-1994

simulated sources (ionization chambers) ("dose calibrator" ionization chambers) Simulated sources usually contain long-lived radionuclides, alone or in combination, that are chosen to simulate, in terms of photon or particle emission, a short-lived radionuclide of interest.

(NI) N42.13-1986

simulated times Time as represented within a simulation. *Synonym:* virtual time. *See also:* real time; fast time; slow time.

(C) 610.3-1989w

simulation (1) (analog computer) The representation of an actual or proposed system by the analogous characteristics of some device easier to construct, modify, or understand.

(C) 165-1977w

(2) (A) (modeling and simulation) (software) A model that behaves or operates like a given system when provided a set of controlled inputs. *Synonym:* simulation model. *See also:* emulation. (B) (modeling and simulation) (software) The process of developing or using a model as in definition (A).

(C) 610.3-1989, 610.12-1990

(3) An instruction method employed by some computer-assisted instruction systems, in which a situation is simulated and the student must respond appropriately. *Contrast:* instructional game.

(C) 610.2-1987

(4) (mathematical) The use of a model of mathematical equations generally solved by computers to represent an actual or proposed system.

(C) 165-1977w

simulation application The executing software on a host computer that models all or part of the representation of one or more simulation entities. The simulation application represents or simulates real-world phenomena for the purpose of training or experimentation. Examples of simulation applications include manned vehicle simulators, computer generated forces, environment simulators and computer interfaces between a DIS network and real equipment. The simulation application receives and processes information concerning entities created by peer simulation applications through the exchange of DIS PDUs. More than one simulation application may simultaneously execute on a host computer. The simulation application is the application layer protocol entity that implements standard DIS protocol. *Note:* The term *simulation*

application is used to avoid confusion between procedures and simulation entities. The term *simulation* may be used in place of simulation application.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation clock A counter used to accumulate simulated time.

(C) 610.3-1989w

simulation entity An element of the synthetic environment is created and controlled by a simulation application. It is affected by the exchange of DIS PDUs. Examples of simulated entities are: tank, submarine, carrier, aircraft, missiles, bridges, or other elements of the synthetic environment. It is possible that a simulation application controlling more than one simulation entity. *Note:* Simulation entities may also be referred to as *entities*.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation environment The operational environment surrounding the simulation entities. This environment includes terrain, atmospheric, and oceanographic information assumed that participants in the same DIS exercise will have access to. It is environment information that is adequately correlated with the type of exercise to be performed.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation exercise An exercise that consists of one or more interacting simulation applications. Simulations participating in the same simulation exercise share a common identifier called the exercise identifier. These simulations utilize correlated representations of the synthetic environment in which they operate. *See also:* exercise.

(DIS/C) 1278.1-1995, 1278.2-1995, 1278.3-1996, 1278.4-1997

simulation fidelity (A) The similarity, both physical and functional, between the simulation and that which it represents.

(B) A measure of the realism of a simulation: (C) 610.3-1989w, 610.12-1990 to which the representation within a simulation is compared to a real world object, feature, or condition in a measurable, perceivable manner.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation game A simulation in which the participants compete to achieve some agreed-upon objective within an agreed set of rules. For example, a management game. *Note:* The objective may not be to compete, but to increase the participants' knowledge concerning the simulated scenario, or achieve other goals. *Synonym:* simulation.

(C) 610.3-1989w

simulation host *See:* host computer.

simulation language An application-oriented language used to implement simulations. *See also:* simulation language.

(C/C) 610.13-1993w, 610.12-1990

simulation management A process that provides control of the simulation exercise. Functions of simulation management include: start, restart, maintenance of the exercise, and collection and distribution of data.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation model *See:* simulation.

Simulation Program with Integrated Circuit Emulation (SPICE) A simulation language used widely to simulate electrical circuits.

(C) 610.3-1989w

simulation site Location of one or more simulation entities connected by a LAN.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation time The reference time (e.g., UTC) used in a simulation exercise. This time is established ahead of time by the simulation management function and is common to all participants in a particular exercise.

(DIS/C) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulation time unit (STU) A fixed unit of time used during simulation for evaluation of data.

(SCC20) 1278.1-1995, 1278.3-1996, 1278.4-1997

simulator (1) (analog computer) A device used to represent the behavior of a physical system by virtue of its analog characteristics. In this general sense, all computers are simulators. However in a more restricted definition, a simulator is a device used to interact with, or to train a human operator in the performance of a given task or tasks.

(C) 165-1977w, (T/C) 165-1977w